

WHAT IS CLAIMED IS:

1 1. A socket including a housing, a SD contact, a SD card detect contact, a SD
2 write protect contact, a SM contact, a SM card detect contact, a SM write protect contact
3 and a MS contact, wherein

4 the housing is integrally formed as an insulator and has a first slot and a second
5 slot by two baffles and walls upright to the baffles, dovetailed holes (131) are defined in
6 a bottom face defining the second slot, the housing (10) further has a top side (10d)
7 defining therein a SM terminal hole (14) and two SM protect terminal holes (15,15a),
8 multiple SM terminal fixing slots (143) are defined in the top side (10d) and composed
9 of long terminal slots (140) and short terminal slots (141), multiple MS terminal holes
10 (16) are defined in a bottom side (10c) of the housing (10);

11 the SD contact includes multiple SD terminals each has a fixed portion (22)
12 with a hook (23) formed on a side of the SD contact terminal (21) to correspond to a side
13 face defining dovetailed holes (131) so that after the SD contact terminals (21) are
14 inserted into the dovetailed slots (130), the hook (23) is able to securely engage with the
15 side face defining the dovetailed slot (130), each SD contact terminal (21) further has a
16 wave-patterned contact section (24) formed on a front distal end portion of the SD
17 contact terminal (21) and a welding portion (25) formed on a rear distal end portion
18 opposite to the contact section (24);

19 the SD card detect contact (30) includes a first SD card detect terminal (31) and
20 a second SD card detect terminal (32), the first SD card detect terminal (31) has a fixed
21 portion (311) with a hook (310) formed on a side of the fixed portion (311) to
22 correspond to the first guiding grooves (111) of the housing (10) such that after the first
23 SD card detect terminal (31) is inserted into the corresponding first guiding grooves

1 (111), the hook (310) of the fixed portion (311) is slid in the first guiding grooves (111),
2 a resilient contact is formed in the mediate portion of the first SD card detect terminal
3 (31), a contact (315) is formed on a front distal end portion of the first SD card detect
4 terminal (31) and a welding portion (317) is formed on a rear distal end portion of the
5 first SD card detect terminal (31) by bending, the second SD card detect terminal (32)
6 has a fixed portion (322) with a hook (320) formed on a side of the fixed portion (322) to
7 correspond to the second guiding grooves (112) to position the second SD card detect
8 terminal (32) inside the housing and maintain a distance with the first SD card detect
9 terminal (31), a contact plate (324) is formed on a front distal end portion of the second
10 SD card detect terminal (32) and a welding portion (326) is formed at a rear distal end
11 portion of the second SD card detect terminal (32);

12 the SD write protect contact (40) is composed of a first write protect terminal
13 (41) and a second write protect terminal (42), the first write protect terminal (41) has a
14 fixed portion (411), a contact plate (413) formed on a front distal end portion thereof and
15 a welding portion (415) formed on a rear distal end portion thereof, the second write
16 protect terminal (42) has a fixed portion (422) to correspond to a fourth guiding grooves
17 (114) in the housing (10) such that after the second write protect terminal (42) is inserted
18 into the fourth guiding grooves (114), the fixed portion (422) is able to engage with a
19 side face defining the fourth guiding grooves (114), the second write protect terminal
20 (42) further has a contact (424) formed on a front distal end portion thereof and a
21 welding portion (426) formed on a rear distal end portion thereof;

22 the SM contact (50) is composed of multiple SM long terminals (51) and
23 multiple SM short terminals (52), each of the SM long and short terminals (51,52) has a
24 fixed portion (53) to correspond to and to be received in the SM terminal fixing slots

1 (143), each of the SM long terminals (51) has an extension (511) extending from the
2 fixed portion (53), a wave-line contact section (510) extending from the extension (511)
3 and a welding portion (54) formed on a rear distal end of the fixed portion (53), the SM
4 short terminals (52) has a wave-like contact section (520) extending directly from the
5 fixed portion (53) and a welding portion (54') formed on a rear distal end of the fixed
6 portion (53');

7 the SM card detect contact (60) has a first SM card detect terminal (61)
8 corresponding to and to be received in the SM terminal hole (14) of the housing (10) and
9 a second SM card detect terminal (62), the first SM card detect terminal (61) has a
10 contact plate (610) formed on a mediate portion of the first SM card detect terminal (61)
11 and a welding portion (611) formed on a rear distal end thereof, the second SM card
12 detect terminal (62) is received in the SM terminal hole (14) of the housing (10) and on
13 top of the first SM card detect terminal (61), the second SM card detect terminal (62) has
14 a contact plate (620) formed on a mediate portion thereof and a welding portion (621) on
15 a rear distal end thereof;

16 the SM write protect contact (70) includes a SM long write protect terminal (71)
17 and a SM short write protect terminal (72), both the SM long write protect terminal (71)
18 and the SM short write protect terminal (72) respectively have a fixed portion (73,74) to
19 enable the SM long write protect terminal (71) and the SM short write protect terminal
20 (72) to be riveted on the top side (10d), a contact (75,75a) is formed on a distal end
21 portion of each of the SM long write protect terminal (71) and the SM short write protect
22 terminal (72) and able to extend into the SM protect terminal holes (15,15a) in a top side
23 (10d) of the housing (10), a welding leg (78,79) is formed on another distal end of the
24 SM long write protect terminal (71) and the SM short write protect terminal (72)

1 respectively;

2 the MS contact (80) includes MS contact terminals (81) each having a fixed
3 portion (82) to extend into openings (161) of the MS terminal holes (16) and abut side
4 faces defining dovetailed slots (160) communicating with the openings (161), a contact
5 (84) is formed on a front distal end portion of the MS contact terminal (81) to extend out
6 of a corresponding one of the MS terminal holes (16) and a welding portion (85) is
7 formed on a rear distal end portion of the MS contact terminal (81),

8 whereby the socket for MS card, SD card, MMC card and SM card is formed.

9 2. The socket as claimed in claim 1, wherein a pair of vertical grooves (155,156)
10 are defined in a side face of the housing to receive therein the welding portions of the SM
11 long and short terminals.

12 3. The socket as claimed in claim 1, wherein the housing has a positioning block
13 formed on a rear side of the housing and having grooves defined in side faces thereof to
14 correspond to and receive therein the welding portions of the SM long and short
15 terminals.

16 4. The socket as claimed in claim 1, wherein the housing has a T-shaped block
17 (115) to separate the resilient contact (313) and the contact (315) of the first SD card
18 detect terminal (31) from the contact plate (324) of the second SD detect terminal (32)
19 after the first and second SD card detect terminals (31,32) are inserted into the first and
20 second guiding grooves (111,112).

21 5. The socket as claimed in claim 1, wherein the housing has two recessed areas
22 (18,18a) to receive therein a fixing plate (182) which has a welding portion (184)
23 formed on a rear distal end portion of the fixing plate (182).

24 6. The socket as claimed in claim 1, wherein the housing further has a snapping

1 plate hole (19) and a snapping plate seat (191) provided with a fixing groove (193), a
2 MS snapping plate (90) has a fixed portion (91) to correspond to and to be securely
3 received in the fixing groove (193) and a snapping contact (93) formed on a front end
4 portion of the MS snapping plate (90) to be riveted on the snapping plate seat.

5 7. The socket as claimed in claim 1, wherein the housing further has two pairs of
6 positioning bosses (185,186) may be formed on four corners of the bottom side (10c) of
7 the housing (10) such that precision is enhanced when the housing (10) is placed on top
8 of a printed circuit board.

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